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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
RUSSELL, WANDA Z

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/658,161	KARAOGUZ ET AL.
	Examiner	Art Unit	
	WANDA Z. RUSSELL	2616	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>15 February 2008</u>.

2a) ☒ This action is **FINAL.**   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-42</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-42</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   **Claims 1-40** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Matthews (U.S. Patent 5,521,910), in view of Beshai et al. (Pub. No. US 2002/0131363

A1).

        For **claim 1**, Matthews teaches a method for providing enhanced connectivity

(best path, col. 1, line 18) in a multi-protocol (col. 16, lines 28-29. Note that these two

paragraphs are in the same endeavor) network, the method comprising:

        aggregating messages (combination of source port, source MAC, …, refer to col.

17, lines 37-39) from a physical layer (611-Fig. 22. Note that Fig. 22 is an illustration of

a port object for the switch of Fig. 21, and Fig. 21 is an illustration of the software

embodiment of the invention) of each communication band (col. 5, lines 59-61) and

each communication channel (all nodes, col. 19, line 19) associated with each of a

plurality of protocols (col. 16, lines 28-29) in a single multi-protocol layer of the multi-

band, multi-protocol network (Figs. 11A-C, and col. 6, lines 56-57);

        identifying (determination, col. 18, line 63) an optimal communication path (best

path, col. 18, line 63) from among said communication band and said communication

channel based on said single multi-protocol layer (Figs. 11A-C, and col. 6, lines 56-57); and

establishing (get path, 224-Fig. 11C) a communication session using said identified optimal communication path (224-Fig. 11C, and col. 6, lines 56-57).

However, Matthews fails to specifically teach a multi-band network for this application.

Beshai et al. teach a multi-band network (0051], lines 9-12) for this application.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine Matthews et al. with Beshai et al. to obtain the invention as specified, for more flexible network applications.

For **claim 2**, Matthews and Beshai et al. teach everything claimed as applied above (see claim 1). In addition, Matthews teaches the method according to claim 1, comprising determining (col. 18, line 63) based on said aggregated messages, whether at least one of said communication channels, said communication bands, and a combination of said communication channels and said communication bands provides said optimal communication path (best path, col. 18, line 63) for said communication session (col. 4, lines 30-39).

For **claim 3**, Matthews and Beshai et al. teach everything claimed as applied above (see claim 1 and 2). In addition, Matthews teaches the method according to claim 2, comprising selecting (pursue, col. 4, line 36) at least one of said communication channels and communication bands, and a combination of said communication

channels and said communication bands for providing said communication session (col. 4, lines 30-39).

For **claim 4**, Matthews and Beshai et al. teach everything claimed as applied above (see claim 1, 2, and 3). In addition, Matthews teaches the method according to claim 3, comprising locating (ARP from mapping, col. 17, line 13) said single multi-protocol layer (IP, col. 17, line 10) as a sublayer within a data link layer (col. 17, line 14).

For **claim 5**, Matthews and Beshai et al. teach everything claimed as applied above (see claim 1, 2, and 3). In addition, Matthews teaches the method according to claim 3, comprising interfacing (extract, col. 34, line 57) said single multi-protocol layer above a MAC layer (col. 34, lines 57-58), said MAC layer interfaced (col. 10, line 50, and 48-50) with said physical layer that is located below said MAC layer.

For **claim 6**, Matthews and Beshai et al. teach everything claimed as applied above (see claim 1, 2, 3, and 4). In addition, Matthews teaches the method according to claim 4, wherein said single multi-protocol layer is a super channel (best path, Title) sublayer, said super channel sublayer being said sublayer of said data link layer (col. 17, line 14).

For **claim 7**, Matthews and Beshai et al. teach everything claimed as applied above (see claim 1). In addition, Matthews teaches the method according to claim 1, comprising monitoring (check, col. 8, line 8 and 6-10) at least a portion of said aggregated messages in said single multi-protocol layer by at least one of a network management process (col. 3, line 23), a bandwidth management process (col. 1, line 15), a load balancing process (discover neighboring nodes, col. 4, lines 26-30), a

session control process (col. 3, line 59) and a QoS management process (col. 3, line 25). (Also see col. 4, lines 39-46).

For **claim 8**, Matthews and Beshai et al. teach everything claimed as applied above (see claim 1, and 7). In addition, Matthews teaches the method according to claim 7, comprising interfacing (operate, col. 3, line 23) at least one of said network management process, bandwidth management process, load balancing process, session control process and QoS management process with said super channel (col. 3, lines 16-25, and summary, col. 2, lines 65-col. 6, line 28).

For **claim 9**, Matthews and Beshai et al. teach everything claimed as applied above (see claim 1, 7, and 8). In addition, Matthews teaches the method according to claim 8, comprising extracting (col. 14, line 66) channel specific data from said single multi-protocol layer by at least one of said network management process, bandwidth management process, load balancing process, session control process and QoS management process (summary, col. 2, lines 65-col. 6, line 28).

For **claim 10**, Matthews and Beshai et al. teach everything claimed as applied above (see claim 1, 7, 8, and 9). In addition, Matthews teaches the method according to claim 9, comprising sharing (col. 4, line 48) channel information acquired by each of said network management process, bandwidth management process, load balancing process, session control process and QoS management process among one or more of said network management process, bandwidth management process, load balancing process, session control process and QoS management process (summary, col. 2, lines 65-col. 6, line 28).

For **claims 11-20**, they are machine-readable storage (medium) claims

corresponding to method claim 1-10. Therefore they are rejected for the same reason

above.

For **claims 21-40**, they are system claims corresponding to method claim 1-10,

Therefore they are rejected for the same reason above.

3.   **Claims 41-42** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Voldman et al. (U.S. Patent 7,085,306), in view of Beshai et al. (Pub. No. US

2002/0131363 A1).

For **claim 41**, Voldman et al. substantially teach a system for providing enhanced

connectivity in a multi-band, multi-protocol network, the system comprising:

a physical layer (38-Fig. 2);

a MAC layer above (44-Fig. 2) and interfacing with said physical layer (Fig. 2);

and

multi-protocol layer above (security 46, and PPP 50 -Fig. 2) and interfacing with

said MAC layer (Fig. 2, and col. 9, lines 8-16).

However, Voldman et al. fail to specifically teach a multi-band network for this

application.

Beshai et al. teach a multi-band network ([0051], lines 9-12).

Therefore, it would have been obvious to a person of ordinary skill in the art at

the time the invention was made to combine Voldman et al. with Beshai et al. to obtain

the invention as specified, for more flexible network applications.

For **claim 42**, Voldman et al. and Beshai et al. teach everything claimed as

applied above (see claim 41). In addition, Voldman et al. teach the system according to

claim 41, wherein said multi-protocol layer and said MAC layer are part of a data link

layer (Fig. 2).

Response to Arguments

4.   Applicant's arguments filed 2/15/2008 have been fully considered they are not

persuasive.

5.   Applicant argues that the "path values a, ..., n" in the reference (col. 19, lines 18-

19) of Matthews, is not physical layer message.

In another paragraph in the same endeavor, Matthews teaches aggregating

messages (combination of source port, source MAC, ..., refer to col. 17, lines 37-39)

from a physical layer.

6.   Applicant argues that Matthews doesn't teach multi-band.

In response, the Examiner respectfully disagrees.

The reason last office action was non-final was that the second reference, Beshai

was introduced to reject the issue of multi-band ([0051], lines 9-12). Also read Section 5

of last office action.

7.   Applicant argues that Matthews doesn't teach multi-protocol network.

In response, the Examiner respectfully disagrees.

Matthews teaches in col. 16, lines 28-29 that a different protocol decode logic

would be provided for each network protocol. Also read Section 6 of last office action.

8.   Applicant argues that Voldman et al. do not teach the limitation of "a multi-protocol layer above, and interfacing with said MAC layer" as recited by the applicant in claim 41.

In response, the Examiner respectfully disagrees.

In col. 9, lines 8-11, Voldman et al. state that "The MAC layer 44 may use a protocol described in IEEE 802. However, other MAC layer protocols could also be used, such MCNS MAC layer protocol, for instance. Above the MAC layer 44 may be a link security protocol stack. Note that the security protocol stack is above MAC layer". It is clear that Voldman et al. teach a multi-protocol layer.

The examiner also points out that although the claim 41 is independent, it is a system claim associating with other method claims in the invention. In claim 4, applicant clearly states "single multi-protocol layer as a sublayer within a data link layer". This is exactly what depicted in Fig. 2 by Voldman et al.

9.   Rejection of dependent claims remains effective.

Conclusion

10.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of
the advisory action. In no event, however, will the statutory period for reply expire later
than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to WANDA Z. RUSSELL whose telephone number is
(571)270-1796. The examiner can normally be reached on Monday-Thursday 9:00-6:00
EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for
the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the
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system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Seema S. Rao/
Supervisory Patent Examiner, Art
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